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Section 1: ADMISSIONS

A) Dates

Applications for Fall admission are typically due in February; refer to the Graduate School website (www.umass.edu/gradschool) for official dates.

In general, applications for Spring admission are discouraged, but they may be considered in some circumstances. Typically, only students who have taken the introductory epidemiology (EPI 630) and biostatistics (BIOSTAT 540 or 590AF) courses (or equivalent courses at another institution) are accepted for Spring admission.

B) MPH vs. MS

Complete descriptions of the MPH and MS degree programs can be found elsewhere in this manual. Traditionally, the MPH program is intended for students with prior public health experience and/or professional degrees, while the MS program is appropriate for students without a background in public health and/or those who wish to pursue research-based careers.

Students may apply to either program, regardless of their prior degree(s). Upon enrollment, students should discuss their choice of program with their academic advisor. If a switch to a different program (i.e. MPH or MS) is desired, the advisor will submit a memo with the requested change to the Graduate Program Director for final approval.

C) The PhD program

The PhD program is highly selective, and typically only 2-4 new PhD students are accepted each year. Students usually have a prior graduate-level degree, though exceptional students with only a BA/BS may be considered. Successful PhD applicants typically have strong GRE scores (i.e. above the 60th percentile) and a clear interest in pursuing epidemiologic research.

D) Applying to the PhD program while a master student

We encourage current MPH and MS students with a strong interest in epidemiology to consider applying to the PhD program. Applications will be considered after the first year in the MPH/MS program (i.e. students may apply by February of their second year for admission to the PhD program starting the following Fall semester). In addition to the requirements described above, the student’s performance in his/her first year of coursework for the MPH and MS as well as potential fit within the Epidemiology program will be considered.

E) Financial aid

We offer a limited number of teaching assistant (TA) and research assistant (RA) positions, which include a stipend and a tuition waiver. Priority is given to PhD students and then 2nd year MS/MPH students. It is unlikely that first year students will be given positions, though some exceptional PhD applicants may be promised positions upon admission.

Available positions and an application are posted on this website: http://www.umass.edu/sphhs/public-health/academics/financial-aid. If none are listed currently, keep checking as they often become available throughout the semester. Additionally, our students have been successful obtaining TA/RA positions outside of
our department, for example in nutrition, nursing, psychology and chemistry. Students can search for available positions on the websites of those departments and on the Graduate School’s website.

Additional information on financial aid can be found in Section 4: Student Resources.
Section 2: ADVISING

A) Who is my faculty advisor?

All students are assigned an academic advisor from amongst the epidemiology faculty at matriculation. The name of your advisor should have been included in letters of acceptance (contact the administrative assistant for epidemiology, Deb Osowski, in room 415 at 413-545-4603 with questions about the name of your advisor). Academic advisors can be consulted to address questions regarding class registration, progress monitoring, and other policy issues.

For students who register for the master’s thesis, master’s project, or PhD dissertation, the chair of the thesis/project/dissertation committee will serve as the research advisor and will replace the academic advisor as the primary advisor. Students who do not enroll for the thesis/project/dissertation will retain their academic advisor.

B) When should I meet with my advisor?

It is required that students meet with their advisor at least once per semester to review progress toward completing the degree requirements; advisor contacts should be recorded on the tracking form, along with the advisor’s signature.

C. Am I meeting requirements to maintain full-time student status?

Information regarding academic status can be found in the “Department of Public Health Graduate Program Policies and Procedures” on the website for the School of Public Health and Health Sciences (SPHHS), https://www.umass.edu/sphhs/epidemiology/academics. In brief, students enrolled in at least 9 credits/semester are considered full-time. In addition, students are considered full time if they are: 1) Masters and MPH students in their last academic semester who are enrolled in at least 3 credits; 2) doctoral students who are preparing for the comprehensive exams; or 3) doctoral students who have passed their comprehensive exams, are paying program fees, and are working on their dissertation; in these instances, the student’s faculty advisor needs to certify in writing to the Graduate Program Director that the work is equivalent to the effort of a full time student for each applicable semester.

D. What are the requirements regarding grades?

Information regarding academic standing can be found in the “Department of Public Health Graduate Program Policies and Procedures” on the website for the School of Public Health and Health Sciences (SPHHS), https://www.umass.edu/sphhs/epidemiology/academics. In brief: All classes that count toward the degree must be taken for a letter grade (i.e., P/F grade basis is not allowed), with the exception of PhD seminar (EPI 892).

A minimum GPA of 3.0 must be maintained. Students who have a GPA of 2.8 or lower for two consecutive semesters may be classified as provisional.

Grades lower than a B- in any of the core public health courses will not count toward the public health core requirement. Students may retake these courses. Students who receive lower than a B- a second time must petition the Associate Dean for Academic Affairs in order to retake the class again.
E. I am a provisional student – what does that mean?

Students who are accepted provisionally must register for the following four classes, or more, during their first semester: BIOSTAT 540, Introductory Biostatistics; EPI 630, Principles of Epidemiology; BIOSTAT 691F, Data Management; and one of EHS 565, HPP 601, HPP 620. Provisionally accepted students must receive a grade of B or better in all first semester courses – incompletes or withdrawals will be considered as not having met the B grade requirement. Failure to meet these requirements will result in withdrawal from the Epidemiology program.

Students who are assigned provisional status due to consecutive semesters of GPA less than 2.8 (as described above) must raise their GPA to 3.0 or else be subject to academic dismissal (as described in the “Department of Public Health Graduate Program Policies and Procedures” on the website for the School of Public Health and Health Sciences (SPHHS), https://www.umass.edu/sphhs/epidemiology/academics, under the Academic Monitoring section).
Section 3: COURSES

A. Planning your coursework on campus

Course requirements for each of the degrees in epidemiology are listed in Table 3-1, Degree Requirements. Descriptions of classes that fulfill elective requirements, and information regarding when courses are offered is shown in the appendix. The full course schedule is available on SPIRE (spire.umass.edu)

B. Courses not offered on campus at UMass Amherst

A total of 12 credits can be transferred from other sources, combined. Additionally:
  o A maximum of 6 credits may be completed online (UMass)
  o A maximum of 6 credits may be completed at Worcester (UMass)
  o A maximum of 6 credits may be transferred from other institutions

For credits to be considered for transfer, students must have earned a grade of B or better, and cannot have applied the credits to a previous degree. All requests for transfer credits need to be discussed and approved with your academic advisor, who may request a copy of the syllabus prior to making a final decision. If possible, request for transfer credits should be made prior to registering for the course, to prevent the student investing time and resources in a class that does not meet program criteria.

C. Policy for independent studies

Independent studies are offered at the discretion of faculty. Independent studies can be taken for 1 – 3 credits, in accordance with the number of contact hours associated with each level of credit. Working together, students and faculty should prepare a contract with expectations clearly specified; provide information on how IDs are included on tracking forms (where); maximums of 6 credits for PhD and 3 credits for MS/MPH.

D. Seminar attendance as part of EPI 630, EPI 632, EPI 737

Attendance at the regular Friday Seminar Series is a requirement for students taking 630, 632, and 737. You should check with the course instructors for specific details.
Section 4: STUDENT RESOURCES

A. Financial Aid

Financial aid may be available through either the University or through individual Departments. There are several possibilities for obtaining financial support, including graduate assistantships (i.e., research or teaching assistantships), the Dean’s PhD Fellowship program, or other scholarships (e.g., the Corinne A. Johnson Memorial Scholarship). A good place to find information about financial aid opportunities at SPHHS is at the following website: http://www.umass.edu/sphhs/public-health/academics/financial-aid/

Below is the link to the University Financial Aid website, which has detailed information on these and other financial aid opportunities (e.g., federal loan programs): http://www.umass.edu/umfa/

Students who obtain a graduate assistantship usually work 10-20 hours per week and are paid according to a union negotiated pay scale. Further, graduate assistantships that are at least 10 hours per week include a benefit of tuition and fee waivers for at least one semester. Whether the fee waiver is for one or two semesters depends upon the number of hours worked (e.g., as of 2014, students working 20 hours/week for a full semester qualify for a full year tuition waiver). Students are usually limited to one graduate assistantship at a time (from any department on campus), so that these relatively limited opportunities can be offered to as many students as possible. Depending upon the student’s background and skill set, they may qualify for assistantships in other departments/schools as well (e.g., nursing, nutrition, psychology); check these departmental websites for possible opportunities.

B. Travel funding

Travel funds to defray the cost of attending professional scientific meetings are available to graduate students through several sources

- The Department of Biostatistics and Epidemiology: Students who are presenting their research at a meeting, in either an oral or poster presentation, are eligible for up to $500 per academic year. Students who are not presenting at the meeting are eligible for reimbursement of up to $200 per academic year. To apply for these funds, students should submit a BioEpi Student Travel Grant application to the Biostatistics and Epidemiology Division Director. A copy of this form can be found in the appendix. Students receiving the funds should keep a copy of this signed form and all travel receipts.

- UMass Graduate School: Funding of up to $300/student also is available through the Graduate School for students who will be presenting their research at a conference. The Graduate Program Director in the Department of Public Health (Dr. Paula Stamps) administers these funds. Funds are usually awarded on a first come-first serve basis, so it is important to submit a request for these funds as soon as your abstract has been accepted for presentation. The Graduate Student Travel Grant application form is available on the following webpage: http://www.umass.edu/sphhs/public-health/academics/graduate-programs

- Travel funds also may be available through the student’s research mentor; please be sure to check with your faculty mentor regarding funding for travel.

Prior to the trip, students must complete a Travel Preauthorization Form and have it signed by their advisor. This signed, dated form should be kept until after the travel is completed, and then submitted along with Travel Reimbursement Form and all original receipts. Copies of both of these forms can be found at: http://www.umass.edu/sphhs/faculty/deans-business-center/forms/travel
See Deb Osowski, the BioEpi Administrator, for any questions related to travel reimbursement.

Postdoctoral fellows are ordinarily not eligible for the Biostatistics and Epidemiology Department travel funds, as their travel funding would typically come from their mentor’s research grant. However, if funding is still needed, their faculty mentor may request of the Epidemiology Program that an exception to this policy be made.

C. Research funding

Research funding is generally available through a specific faculty member’s research grant. Available research assistantships are posted on the SPHHS financial-aid website noted above. Also, if you are particularly interested in the research carried out by a specific faculty member, we would encourage you to contact that faculty member directly to find out about any current or pending research funding opportunities. (Note, there may also be unfunded opportunities available that, although they do not provide financial support, may provide you with valuable research experience).

The National Institutes of Health also fund pre-doctoral training for doctoral students, e.g., through F31 Fellowships. See the link below to explore these potential, though very competitive, grant opportunities. Also, interested students should be sure to discuss this potential option with their advisor.  
http://grants.nih.gov/training/F_files_nrsa.htm

D. Teaching experience

Obtaining teaching experience is very important for doctoral students, and can be very useful and rewarding for master’s students as well. There are a number of opportunities to become a teaching assistant either for courses taught by the Biostatistics and Epidemiology Department, or as part of the undergraduate program in public health. Further, there are occasional opportunities to either TA or serve as an instructor for courses offered online through the University/SPHHS continuing education program.

When teaching assistants are needed for any Biostatistic or Epidemiology course, their availability is posted on the following website for one week: http://www.umass.edu/sphhs/public-health/academics/financial-aid/

We recommend you bookmark this website and check it weekly. Application instructions are provided on the website. Most teaching assistantships are for 10 hours per week for a semester. If you are interested in serving as a teaching assistant for a specific course, you might email the instructor directly to let them know and to find out if any opportunities are upcoming.
Section 5: Masters of Science Thesis Guidelines

It is the student's responsibility to see that these guidelines are followed properly. Please read them carefully, and reread them often as you progress through the various stages of your thesis. Although the process may seem somewhat daunting, almost every student manages to complete the thesis. Even climbing Mount Everest is achieved by continuing to put one foot in front of the other, one small step at a time.

A. Registering for M.S. Thesis Credits

An M.S. student should register for three credits of EPI 699: Master’s Thesis during the second year of class work, generally during the spring semester. Students should register for credits using the specific EPI 699 designation assigned to their Committee Chair, and register for credits as Pass/Fail. To finish the thesis, or to even make substantial progress on the thesis during the fourth semester, it is recommended the student register for a maximum of one course in addition to the thesis credits. Otherwise, as faculty experience has shown repeatedly, the student is diverted by the immediacy of course work and inevitably neglects the thesis.

B. Nature and Purpose of the Thesis

The master's thesis provides the student with an opportunity to develop an individual research project under the guidance of a faculty committee. The student gains experience in problem identification, study design, data analysis, and interpretation of results as an investigator working in collaboration with fellow professionals. The final write-up of the thesis requires an organized presentation of the theory, methods, and results in the context of the existing literature. The final oral presentation of the project provides a collegial forum within which to present the major points of the project and defend the approaches taken.

It is expected that the thesis will have a strong theoretical foundation, and will demonstrate the student's competence in applying theory and appropriate methodology to investigating a problem. Mastery of methodology, including the understanding of the strengths and limitations of the research, has a greater emphasis than developing new information. The faculty considers the process of carrying out the study, and the integration of knowledge by the student, to be more important than the findings which result.

C. Coming Up With a Topic

Students should start considering possible thesis topics by the end of their second semester. The student considers possible topics based upon areas of personal interest, practicum or internship experience, discussions with other students, and with faculty. One's academic advisor and/or other faculty may be approached for help in exploring possible topics. What is an appropriate project? The only possible answer to this question is: "A project which enough faculty members find acceptable so as the student is able to constitute an appropriate committee." A review of M.S. theses recently completed by other students will help give you an idea of the range of acceptable projects. Examples of recent MS Theses can be found on the Library website at: http://scholarworks.umass.edu/theses/

D. Assembling the Thesis Committee

Once the specific topic is decided upon, the student should ask a faculty member to be chair of the thesis committee. As the topic is developed further, the student selects other committee members in conjunction with the chair. If the committee chair is not the same as the academic advisor, then the chair automatically assumes the role of the academic advisor and the student's advising folder should be transferred to the committee chair.
The M.S. thesis committee will have at least two Epidemiology faculty. The chair must be a tenure-system member of the faculty in Epidemiology at the Amherst campus. It is recommended that the committee also include a Biostatistics faculty member. Graduate faculty from other campus Departments or health agency adjunct faculty are often useful contributors to a committee depending upon the topic.

Adjunct faculty, if they have a graduate level appointment, are eligible to serve as voting members of a committee but may not serve as chair of a committee if the student is registered through the Amherst campus. Other related professionals may serve on the committee and may be listed as a consultant on the cover page, but have no vote at the time of the defense even though they are expected to attend the defense.

Once the Committee has been determined, the student should complete the M.S. Thesis Committee Nomination Form and submit this to their Chair, who will then submit it to the Graduate Program Director.

E. Developing the Thesis Proposal
After the committee is recruited it is the chair's responsibility to assist the student in developing the thesis proposal to be presented to the other committee members for their input.

A recommended final proposal format is as follows:

1) Statement of the Problem
   • A background statement outlines the nature of the problem to be studied and indicates the contribution the study will make.

2) Brief Review of the Literature
   • A brief review of the literature should include at least several primary articles or recent review papers and should document the major issues to be addressed in the proposed project. It is expected that this section will define the conceptual background of the project.

3) Research Questions (Hypothesis)
   • A statement of the questions to be addressed, the goal(s) of the project, or the hypothesis.

4) Methods
   • The central feature of the proposal. This section should provide the details on how the study will be carried out. Usual sections include:
     a) Study population
     b) Study design
     c) Definitions of dependent and independent variables (instruments, procedures, etc.)
     d) Table of variables indicating which are dependent, independent, or control including level of measurement for each variable (nominal, ordinal, interval, ratio)
     e) Data analysis plan
        i. General strategy of analysis
        ii. Statistical procedures to be used
        iii. Include dummy data tables for main hypothesis
        iv. Sample size and/or power calculations
     f) Study Limitations
        It is important to demonstrate an understanding of the limitations of the study and any anticipated problems that may be encountered.
g) Significance
There should be some thoughtful comments explaining the importance of the anticipated outcome(s) such as contribution to program effectiveness, better understanding of the etiology of disease, improvement in prevention activities, etc.

h) Human Subject Protection
This section should indicate the procedures which will be used to insure confidentiality and protection of the privacy of the subjects. An informed consent statement should be included if original data are being collected. The section should indicate whether an outside agency Institutional Review Board (IRB) approval of the project is involved. If there is no other human subjects review, the proposal will be referred automatically by the Graduate Program Director to the School's Institutional Review Board. In this case the student is responsible to obtain an IRB form from the Graduate Program Director to be filled out and turned in at the same time as the finished thesis proposal. Data collection from human subjects, or use of confidential records, may not proceed until an IRB approval has been obtained.

i) Access to study population or faculty/agency database.
Include a written statement from the agency (or faculty owner) or gatekeeper of a data set or population to be studied indicating their willingness to grant you access to the information or the population.

The proposal represents a demonstrated readiness to conduct research on a specific topic, and the proposed hypotheses or procedures may need to be revised further, with the agreement of the committee, as the project proceeds. The proposal should be written using the future tense. Students may wish to review several recent thesis proposals similar to theirs as available from any faculty member. But the up-to-date outline included in this write-up should be followed.

F. Format for the Proposal

It is highly recommended that the student follow the guidelines presented in the Graduate School’s Guidelines for Master’s Theses and Doctoral Dissertations even when preparing the first draft of the thesis proposal: http://www.umass.edu/gradschool/sites/default/files/thesis_and_dissertation_guidelines.pdf

Additionally, the Office of Information Technology offers workshops on thesis formatting that may be helpful in preparing the proposal and final version of the thesis. General advice on formatting and information on workshop can be found on the OIT website at: http://www.oit.umass.edu/support/workshops-training/format-a-thesis-or-dissertation-ms-word-general-advice

G. Timelines

The timeline for preparation of the MS thesis proposal is included in the Appendix. Students should work with their Chair to ensure that they are meeting the deadline for submission of their proposal to the Graduate School. In addition, students are encouraged to meet with each member of their committee in person at least once during the fall semester as they prepare the final version of their proposal.

The Signature page for M.S. thesis proposal, included in the Appendix, must be signed by all members of the committee and then submitted along with the thesis proposal to the Graduate Program Director for the Department. The Graduate Program Director still signs the proposal if also a member or even the chair of the committee. If the committee and thesis proposal are appropriate, the Graduate Program Director submits the proposal with a request to the Graduate School to appoint the committee.
H. Human Subjects Approval

Prior to beginning any involvement with human subjects or data meeting the definition of human subjects, the student must complete training in the use of human subjects for research, as mandated by the University. Information on the University’s policies concerning the use of human subjects in research can be found at: http://www.umass.edu/research/human-research-protection-office-hrpo

Students should complete training through the CITI system, if they have not already done so for another project and/or their training is out of date. Also, appropriate IRB approval must be obtained for the student’s research. It is the responsibility of both the student and the committee chair to ensure that the student has met all University policies concerning human subjects. Information on CITI training can be found at: http://www.umass.edu/research/training-and-education

I. Carrying Out the Project

The committee chair is expected to assume the major role in guiding the student through the project. Other faculty generally contribute to selected aspects of the project. It is important that the student keep each of the committee members up-to-date on significant aspects of the project. In the case of conflicting or extreme demands from the committee, the student should inform the chair and request a committee meeting to resolve any issues. Any substantial change in the proposed project should trigger a meeting of the full committee.

J. Writing the Thesis

Be sure to strictly follow the Graduate School guidelines for Master's theses to the letter. Otherwise you will have a lot of unnecessary hassle at the last minute when you need it the least. Students should use the table format, reference format, and reference citation method of the American Journal of Epidemiology. If you transfer over any of your thesis proposal text to the thesis, please change the text from the future tense to the past tense.

The chapter headings of the thesis are as follows: Introduction; Review of the Literature; Methods; Results; Discussion. As with all scientific writing, the writing of the Master’s thesis usually involves an intense period of writing, editing, rewriting, editing, rewriting, and so forth. To maximize the clarity and impact of the writing included in the thesis, students are encouraged to contact the University’s Writing Center, and meet one-on-one with a writing tutor. This may be especially beneficial for students who do not have extensive experience with scientific writing or for whom English is a second language. Information on the Writing Center can be found at: http://www.umass.edu/writingcenter/

K. Scheduling the Thesis Defense

Students should provide a complete draft of their thesis to their committee at least 10 days prior to the deadline for scheduling of the thesis defense, as indicated on the M.S. Thesis Calendar. Faculty members then have 10 days to review the thesis and determine whether the project is generally ready for defense. At this stage, Faculty may provide minor comments that they expect to be addressed prior to the defense. However, if major changes are required at this stage, it may not be possible to schedule a defense in time to meet the May graduation deadline.

When the committee chair affirms a consensus among the committee members that the project is essentially completed and is ready for the defense, the chair fills out and signs the M.S. Thesis Defense Notification Form, included in the Appendix, and circulates it to the other members to sign. The student can then take the
signed form to the Department Administrator and request that the defense be scheduled. Please note, as indicated on the M.S. Thesis Calendar, the submission of the defense form must precede the defense by at least two weeks. At least one week after the thesis defense is built into the schedule to allow for final revisions or changes to the thesis prior to submission to the Graduate School, and to allow for rescheduling of the defense in the event that an emergency situation arises.

Please be advised that the faculty have nine month appointments and are not obligated to be available during June, July, or August. Also, in your planning you should query the faculty about any sabbatical or leave of absence plans.

L. Who May Attend the Thesis Defense

The thesis defense is public. Departmental faculty member and students are welcome to attend. First year students are encouraged to attend MS thesis defenses, as they will be underdoing similar projects the following year.

M. The Thesis Defense Process

Note that the Graduate School requires that all members of the committee must be present for the defense to be held. Each committee member shall have received a "final" polished version of the thesis at least a week before the defense.

The committee chair oversees the proceedings of the defense. The student is expected to present, generally in about 40 minutes, a synopsis of the key elements of the project, especially emphasizing methods, analytical approach, results, limitations, and the significance of the results within the context of the literature. Usually, questions of information or clarification are asked during the presentations, but matters of substance are held for the question period.

N. Outcomes of the Thesis Defense

When the presentation is finished, the chair directs the question period. Upon completion of the question period, the committee then meets in private to discuss the student’s performance and votes for a pass or not. To pass, the candidate must receive a unanimous vote.

Committee members may recommend additional minor changes to the thesis at this time, as some new issue may have been raised during the thesis defense question period.

The student should bring three copies of the M.S. Thesis Signature Page printed on acid-free paper to the defense, which will be signed by all committee members indicating that the student has passed the defense. If only minor changes are required in the final version of the thesis, then most members of the committee are willing to sign the cover sheets at that time. The thesis committee chair signs the cover sheet only when the final copy of the corrected thesis is received. The Graduate Program Director will then sign the cover sheet after the committee chair.

The student should also bring a copy of the Notification of Completion of M.S. Thesis Defense Form, included in the Appendix, to the defense. Upon completion of a successful defense, the committee members sign the form. The student then returns the completed form to the Departmental office. This sheet initiates the Department's Graduate Program Director's formal notification to the Graduate School that you have successfully defended your thesis. The Graduate Registrar then automatically records your PubHlth 699 grade as a Pass.
If the committee is not unanimous in voting to pass the candidate, the student is considered to have not passed the thesis defense at this time. The student is allowed one chance to re-defend the thesis at a later date. The thesis committee will determine the minimum amount of time the student must wait to redefend the thesis, as well as the latest possible date the thesis may be redefended. The chair will present the candidate with a new timeline for revision, review and rescheduling the defense. Please note, given the timeline required by the Graduate School, it is generally unlikely that a student who does not pass a defense in the spring will be able to redefend and graduate for the May graduation date. In this situation, the earliest likely graduation date will be August. In the interim, the student will receive an INC for EPI 699. This designation will be changed upon redefense of the thesis.

O. Submission of the Thesis

After the Thesis defense is successfully passed, students should work with their Thesis chair to complete any additional revisions required by the committee. After the chair has determined that the final draft is acceptable and signs the Thesis Signature Page, the student should submit the thesis to the Graduate School electronically through Scholarworks. Information on the submission process may be found at: http://www.umass.edu/gradschool/current-students/masters-degree-requirements-and-thesis-information/electronic-thesis-submission-pro

P. Archiving of thesis data and statistical code

After the Thesis defense is passed and prior to graduation, students should make sure that a final version of their thesis data set and relevant statistical code (SAS, STATA logs, etc) have been archived in the appropriate folder on the J drive, along with documentation. Students should confirm the location of data with their Chair.

Q. Publications from the Thesis

Where the thesis results are publishable, the student is encouraged to write-up a first draft of the manuscript with him/herself as first author. If the student does not prepare a draft of the manuscript within six months of the defense, especially where the student was using faculty or agency data, it is the prerogative of the committee chair or other committee member or agency person to prepare a first draft and include the student as an author.

In the case of the use of faculty data or data from an outside agency, it is vitally important the authorship of paper(s) resulting from the project be explicitly negotiated in writing in advance of beginning the project. Such an agreement should state the order of authorship for any potential publication(s) and the general content of such publication(s). Failure to address this issue in advance has caused unhappy complications in the past.

R. Final Steps

1. Download the Checklist for Master’s Degree Form and verify that you have met all of the requirements for graduation. This form can be found on the Graduate School website at: http://www.umass.edu/gradschool/sites/default/files/checklist_for_masters_degrees.pdf
2. Pay the commencement and placement fees at the Graduate School Office of Degree Requirements.
3. Fill out the yellow Master’s Degree Eligibility Form from the Office of Degree Requirements. You may wish to list only those courses needed to fulfill the degree requirements. All the courses you have taken will still show up on the transcript, but courses beyond the requirements can often be transferred directly into any Doctoral program pursued in the future, but only if they were not listed for your degree requirements. The Eligibility Form must be reviewed and signed by the Department Graduate Program
Director who certifies that you have met all the degree requirements. The form will then be signed by the Department chair.

4. Fill out a final copy of **Epidemiology Tracking Form**, which will serve as an archive copy of your record with us. The **Tracking Form** and the **Degree Eligibility Form** for the Graduate School should both be filled out as soon as the M.S. defense is scheduled. Do not delay until the last moment.

5. Submit your thesis to the Graduate School through Scholarworks, following procedures described on their website at [http://scholarworks.umass.edu/theses](http://scholarworks.umass.edu/theses)

6. Submit one original copy of your signed **M.S. Thesis Signature Page** printed on acid-free paper to the Graduate Student Service Center.

7. Provide a hard copy of the final draft of your thesis in a modest binder to each member of your committee.
Links to University policies, electronic forms, related to the MS Thesis:

Master’s Degree Eligibility Form:

Checklist for Master’s Degree:
http://www.umass.edu/gradschool/sites/default/files/checklist_for_masters_degrees.pdf

Scholarworks for online submission of Master’s Thesis to the Graduate School:
http://scholarworks.umass.edu/theses

University Guidelines for Master’s Theses and Doctoral Dissertations:

Sample forms for Master’s Theses:
http://www.umass.edu/gradschool/sites/default/files/masters_sample_forms.pdf

University Writing Center
http://www.umass.edu/writingcenter/

American Journal of Epidemiology
http://aje.oxfordjournals.org/
Section 6: Masters of Public Health Guidelines:

Students enrolled in the MPH program have 2 options for the Culminating experience:
1) Completing a 3 credit MPH project, similar in format to a Master’s thesis
2) Taking an MPH exit examination and completing one additional 3 credit course.

Specifics of both options are presented below. Because the coursework associated with each option differs, it is helpful for MPH students to decide during their first year which of the two options they will pursue.

Option 1: MPH Project Guidelines

Students selecting this option will prepare an MPH project, similar to a Masters thesis, as their culminating experience. This is a 3-credit project described in detail below. Because MPH projects generally include extensive scientific writing as well as data analysis, students pursuing this option are expected to take the following **two courses as Epidemiology electives** in the fall of their 2nd year:

- EPI 631: Scientific Writing for Thesis, Dissertation and Grant Proposals in Epidemiology
- EPI 700: Analysis of Epidemiologic Data

It is the student's responsibility to see that these guidelines are followed properly. Please read them carefully, and **reread them often** as you progress through the various stages of your project. Although the process may seem somewhat daunting, almost every student manages to complete the thesis. Even climbing Mount Everest is achieved by continuing to put one foot in front of the other, one small step at a time.

A. Registering for MPH Project Credits

An MPH student should register for three credits of **EPI 696: Independent Study – MPH Problem** during the second year of class work, generally during the spring semester. Students should register for credits using the specific EPI 696 designation assigned to their Committee Chair, and register for credits as Pass/Fail. To finish the project, or to even make substantial progress on the project during the fourth semester, it is recommended the student register for a maximum of one course in addition to the project credits. Otherwise, as faculty experience has shown repeatedly, the student is diverted by the immediacy of course work and inevitably neglects the project.

B. Nature and Purpose of the Project

The master's project provides the student with an opportunity to develop an individual research project under the guidance of a faculty committee. The student gains experience in problem identification, study design, data analysis, and interpretation of results as an investigator working in collaboration with fellow professionals. The final write-up of the project requires an organized presentation of the theory, methods, and results in the context of the existing literature. The final oral presentation of the project provides a collegial forum within which to present the major points of the project and defend the approaches taken.

It is expected that the project will have a strong theoretical foundation, and will demonstrate the student's competence in applying theory and appropriate methodology to investigating a problem. Mastery of methodology, including the understanding of the strengths and limitations of the research, has a greater emphasis than developing new information. The faculty considers the process of carrying out the study, and the integration of knowledge by the student, to be more important than the findings which result.
C. Coming Up With a Topic

Students should start considering possible project topics by the end of their second semester. The student considers possible topics based upon areas of personal interest, practicum or internship experience, discussions with other students, and with faculty. One's academic advisor and/or other faculty may be approached for help in exploring possible topics. What is an appropriate project? The only possible answer to this question is: "A project which enough faculty members find acceptable so as the student is able to constitute an appropriate committee." A review of MPH projects recently completed by other students will help give you an idea of the range of acceptable projects. Examples of recent MS Theses can be found on the Library website at: http://scholarworks.umass.edu/theses/

D. Assembling the Project Committee

Once the specific topic is decided upon, the student should ask a faculty member to be chair of the project committee. As the topic is developed further, the student selects other committee members in conjunction with the chair. If the committee chair is not the same as the academic advisor, then the chair automatically assumes the role of the academic advisor and the student's advising folder should be transferred to the committee chair.

The MPH project committee will have at least one Epidemiology faculty. The chair must be a tenure-system member of the faculty in Epidemiology at the Amherst campus. It is recommended that the committee also include at least one other Epidemiology or Biostatistics faculty member. Graduate faculty from other campus Departments or health agency adjunct faculty are often useful contributors to a committee depending upon the topic.

Adjunct faculty, if they have a graduate level appointment, are eligible to serve as voting members of a committee but may not serve as chair of a committee if the student is registered through the Amherst campus. Other related professionals may serve on the committee and may be listed as a consultant on the cover page, but have no vote at the time of the defense even though they are expected to attend the defense.

E. Developing the Project Proposal

After the committee is recruited it is the chair's responsibility to assist the student in developing the project proposal to be presented to the other committee members for their input.

A recommended final proposal format is as follows:

1) Statement of the Problem
   • A background statement outlines the nature of the problem to be studied and indicates the contribution the study will make.

2) Brief Review of the Literature
   • A brief review of the literature should include at least several primary articles or recent review papers and should document the major issues to be addressed in the proposed project. It is expected that this section will define the conceptual background of the project.

3) Research Questions (Hypothesis)
   • A statement of the questions to be addressed, the goal(s) of the project, or the hypothesis.

4) Methods
   • The central feature of the proposal. This section should provide the details on how the study will be carried out. Usual sections include:
a) Study population
b) Study design
c) Definitions of dependent and independent variables (instruments, procedures, etc.)
d) Table of variables indicating which are dependent, independent, or control
   including level of measurement for each variable (nominal, ordinal, interval, ratio)
e) Data analysis plan
   i. General strategy of analysis
   ii. Statistical procedures to be used
   iii. Include dummy data tables for main hypothesis
   iv. Sample size and/or power calculations
f) Study Limitations
   It is important to demonstrate an understanding of the limitations of the study and
   any anticipated problems that may be encountered.
g) Significance
   There should be some thoughtful comments explaining the importance of the anticipated
   outcome(s) such as contribution to program effectiveness, better understanding of the etiology of
   disease, improvement in prevention activities, etc.
i) Human Subject Protection
   This section should indicate the procedures which will be used to insure confidentiality and
   protection of the privacy of the subjects. An informed consent statement should be included if
   original data are being collected. The section should indicate whether an outside agency
   Institutional Review Board (IRB) approval of the project is involved. If there is no other human
   subjects review, the proposal will be referred automatically by the Graduate Program Director to
   the School's Institutional Review Board. In this case the student is responsible to obtain an IRB
   form from the Graduate Program Director to be filled out and turned in at the same time as the
   finished project proposal. Data collection from human subjects, or use of confidential records,
   may not proceed until an IRB approval has been obtained.
j) Access to study population or faculty/agency database.
   Include a written statement from the agency (or faculty owner) or gatekeeper of a data set or
   population to be studied indicating their willingness to grant you access to the information or the
   population.

The proposal represents a demonstrated readiness to conduct research on a specific topic, and the proposed
hypotheses or procedures may need to be revised further, with the agreement of the committee, as the project
proceeds. The proposal should be written using the future tense. Students may wish to review several recent
project proposals similar to theirs as available from any faculty member. But the up-to-date outline included in
this write-up should be followed. The usual project proposal averages about ten pages in length.

F. Format for the Proposal

It is highly recommended that the student follow the guidelines presented in the Graduate School’s Guidelines for Master’s Theses and Doctoral Dissertations even when preparing the first draft of the project proposal: [http://www.umass.edu/gradschool/sites/default/files/thesis_and_dissertation_guidelines.pdf](http://www.umass.edu/gradschool/sites/default/files/thesis_and_dissertation_guidelines.pdf)

Additionally, the Office of Information Technology offers workshops on project formatting that may be helpful in preparing the proposal and final version of the project. General advice on formatting and information on workshop can be found on the OIT website at: [http://www.oit.umass.edu/support/workshops-training/format-a-thesis-or-dissertation-ms-word-general-advice](http://www.oit.umass.edu/support/workshops-training/format-a-thesis-or-dissertation-ms-word-general-advice)
G. Timelines

The timeline for preparation of the MPH project proposal is included in the Appendix. Students should work with their Chair to ensure that they are meeting the deadline for submission of their proposal to the Department. In addition, students are encouraged to meet with each member of their committee in person at least once during the fall semester as they prepare the final version of their proposal.

The **Signature page for the MPH project proposal**, included in the Appendix, must be signed by all members of the committee and then submitted along with the project proposal to Department office.

H. Human Subjects Approval

Prior to beginning any involvement with human subjects or data meeting the definition of human subjects, the student must complete training in the use of human subjects for research, as mandated by the University. Information on the University’s policies concerning the use of human subjects in research can be found at: [http://www.umass.edu/research/human-research-protection-office-hrpo](http://www.umass.edu/research/human-research-protection-office-hrpo)

Students should complete training through the CITI system, if they have not already done so for another project and/or their training is out of date. Also, appropriate IRB approval must be obtained for the student’s research. It is the responsibility of both the student and the committee chair to ensure that the student has met all University policies concerning human subjects. Information on CITI training can be found at: [http://www.umass.edu/research/training-and-education](http://www.umass.edu/research/training-and-education)

I. Carrying Out the Project

The committee chair is expected to assume the major role in guiding the student through the project. Other faculty generally contribute to selected aspects of the project. It is important that the student keep each of the committee members up-to-date on significant aspects of the project. In the case of conflicting or extreme demands from the committee, the student should inform the chair and request a committee meeting to resolve any issues. Any substantial change in the proposed project should trigger a meeting of the full committee.

J. Writing the Project

Students should use the table format, reference format, and reference citation method of the American Journal of Epidemiology. If you transfer over any of your project proposal text to the project, please change the text from the future tense to the past tense.

The chapter headings of the project are as follows: Introduction; Review of the Literature; Methods; Results; Discussion. As with all scientific writing, the writing of the Master’s project usually involves an intense period of writing, editing, rewriting, editing, rewriting, and so forth. To maximize the clarity and impact of the writing included in the project, students are encouraged to contact the University’s Writing Center, and meet one-on-one with a writing tutor. This may be especially beneficial for students who do not have extensive experience with scientific writing or for whom English is a second language. Information on the Writing Center can be found at: [http://www.umass.edu/writingcenter/](http://www.umass.edu/writingcenter/)

K. Scheduling the Project Defense

Students should provide a complete draft of their project to their committee at least 10 days prior to the deadline for scheduling of the project defense, as indicated on the **MPH Project Calendar**. Faculty members then have
10 days to review the project and determine whether the project is generally ready for defense. At this stage, Faculty may provide minor comments that they expect to be addressed prior to the defense. However, if major changes are required at this stage, it may not be possible to schedule a defense in time to meet the May graduation deadline.

When the committee chair affirms a consensus among the committee members that the project is essentially completed and is ready for the defense, the student can then contact the Department Administrator and request that the defense be scheduled. Please note, as indicated on the MPH Project Calendar, the submission of the defense form must precede the defense by at least two weeks. At least one week after the project defense is built into the schedule to allow for final revisions or changes to the project prior to submission to the Department, and to allow for rescheduling of the defense in the event that an emergency situation arises.

Please be advised that the faculty have nine month appointments and are not obligated to be available during June, July, or August. Also, in your planning you should query the faculty about any sabbatical or leave of absence plans.

L. Who May Attend the Project Defense

The project defense is public. Departmental faculty member and students are welcome to attend. First year students are encouraged to attend MS thesis and MPH project defenses, as they will be underdoing similar projects the following year.

M. The Project Defense Process

Note that the Graduate School requires that all members of the committee must be present for the defense to be held. Each committee member shall have received a "final" polished version of the project at least a week before the defense.

The committee chair oversees the proceedings of the defense. The student is expected to present, generally in about 40 minutes, a synopsis of the key elements of the project, especially emphasizing methods, analytical approach, results, limitations, and the significance of the results within the context of the literature. Usually, questions of information or clarification are asked during the presentations, but matters of substance are held for the question period.

N. Outcomes of the Project Defense

When the presentation is finished, the chair directs the question period. Upon completion of the question period, the committee then meets in private to discuss the student’s performance and votes for a pass or not. To pass, the candidate must receive a unanimous vote.

Committee members may recommend additional minor changes to the project at this time, as some new issue may have been raised during the project defense question period.

The student should bring one copies of the MPH Project Signature Page printed on acid-free paper to the defense, which will be signed by all committee members indicating that the student has passed the defense. If only minor changes are required in the final version of the project, then most members of the committee are willing to sign the cover sheets at that time. The project committee chair signs the cover sheet only when the final copy of the corrected project is received. The Department Chair will then sign the cover sheet after the committee chair. Your committee chair will then communicate your grade for EPI 696 to the Department Administrator for submission.
If the committee is not unanimous in voting to pass the candidate, the student is considered to have not passed the project defense at this time. The student is allowed one chance to re-defend the project at a later date. The project committee will determine the minimum amount of time the student must wait to redefend the project, as well as the latest possible date the project may be redefended. The chair will present the candidate with a new timeline for revision, review and rescheduling the defense. Please note, given the timeline required by the Graduate School, it is generally unlikely that a student who does not pass a defense in the spring will be able to redefend and graduate for the May graduation date. In this situation, the earliest likely graduation date will be August. In the interim, the student will receive an INC for EPI 696. This designation will be changed upon redefense of the project.

O. Submission of the Project

After the Project defense is successfully passed, students should work with their Project chair to complete any additional revisions required by the committee. After the chair has determined that the final draft is acceptable and signs the Project Signature Page, the student should submit the project to the Graduate School electronically through Scholarworks. Information on the submission process may be found at: http://www.umass.edu/gradschool/current-students/masters-degree-requirements-and-thesis-information/electronic-thesis-submission-pro

P. Archiving of project data and statistical code

After the Project defense is passed and prior to graduation, students should make sure that a final version of their project data set and relevant statistical code (SAS, STATA logs, etc) have been archived in the appropriate folder on the J drive, along with documentation. Students should confirm the location of data with their Chair.

Q. Publications from the Project

Where the project results are publishable, the student is encouraged to write-up a first draft of the manuscript with him/herself as first author. If the student does not prepare a draft of the manuscript within six months of the defense, especially where the student was using faculty or agency data, it is the prerogative of the committee chair or other committee member or agency person to prepare a first draft and include the student as an author. In the case of the use of faculty data or data from an outside agency, it is vitally important the authorship of paper(s) resulting from the project be explicitly negotiated in writing in advance of beginning the project. Such an agreement should state the order of authorship for any potential publication(s) and the general content of such publication(s). Failure to address this issue in advance has caused unhappy complications in the past.

R. Steps for Graduation

1) Download the Checklist for Master’s Degree Form and verify that you have met all of the requirements for graduation. This form can be found on the Graduate School website at: http://www.umass.edu/gradschool/sites/default/files/checklist_for_masters_degrees.pdf
2) Pay the commencement and placement fees at the Graduate School Office of Degree Requirements.
3) Fill out the yellow Master’s Degree Eligibility Form from the Office of Degree Requirements. You may wish to list only those courses needed to fulfill the degree requirements. All the courses you have taken will still show up on the transcript, but courses beyond the requirements can often be transferred directly into any Doctoral program pursued in the future, but only if they were not listed for your degree requirements. The Eligibility Form must be reviewed and signed by the Departmental Graduate Program
Director who certifies that you have met all the degree requirements. The form will then be signed by the Department chair.

4) Fill out a final copy of Epidemiology Tracking Form, which will serve as an archive copy of your record with us. The Tracking Form and the Degree Eligibility Form are due to the Graduate School generally in early April, which may be prior to your MPH project defense. Do not delay the submission of these forms until after your MPH project defense!

5) Submit one original copy of your signed MPH Project Signature Page printed on acid-free paper to the Department.

6) Provide a hard copy of the final draft of your project in a modest binder to each member of your committee.

Option 2: MPH Exit Examination

Students selecting this option will take a closed-book comprehensive exam testing their knowledge of the disciplines of public health with primary emphasis on Epidemiology and secondarily Biostatistics, but also including Community Health, Health Policy and Management, Environmental Health Sciences. This exam is offered once per year, generally in the middle of the spring semester. MPH students choosing this option must pass this exam to graduate. MPH students are expected to have completed all courses included in the Public Health Core Curriculum prior to taking the exam. Thus, students selecting this option should have completed the following by the end of the fall semester of their second year:

- EPI 630
- BIOSTAT 540
- EHS 565
- HPP 601
- HPP 620

In addition, to meet the credit requirements of the program, students who opt for the Exit Exam option must take one additional 3-credit elective course. The exam covers the epidemiologic and biostatistical methods covered in required courses and consists of short answer and multiple choice questions. The epidemiology part of the exam includes a section that requires you to answer questions about a journal article from the epidemiologic literature, which is provided to you prior to the exam. Questions on material from the other public health core courses named above will also be included. Questions on material from the other public health core courses named above will also be included.

The exam is 2 hours in length and is given on 1 day only. Those who do not pass the exam may re-take the exam one time when a re-take exam is held, expected to be held two weeks later.
Section 7: Appendices

- BioEpi Graduate Student Travel Grant information and Application
- Formatting guidelines for MS thesis and MPH project (AJE format)
- Thesis committee nomination form
- Signature page for M.S. thesis proposal
- Signature page for MPH proposal
- MS Thesis defense notification form
- Suggested MS thesis calendar
- Suggested MPH project calendar
- Course planning forms
Students who are presenting their research at a meeting, in either an oral or poster presentation, are eligible for up to $500 per academic year. Students who are not presenting at the meeting are eligible for reimbursement of up to $200 per academic year.

Allowed expenses include the following: all travel (including air, train, bus, car fare); conference fees; lodging; parking and/or taxi/shuttle fees. Travel funding is processed as a business expense reimbursement, and must follow the IRS rules, which state that expense reimbursements be processed within 60 days and documented with original receipts.

Please complete the attached BioEpi Student Travel Grant Application Form, including obtaining the signature of your faculty advisor, and forward it to the Department Chair.

**During travel**, be sure to keep all original travel receipts.

**Within two weeks after travel**, complete the SPHHS Travel and Reimbursement Request Form, attach your original receipts and the signed Graduate Student Travel Grant Application. Please give these documents to Deb Osowski, who will gather the necessary signatures and submit the forms for reimbursements. As long as both forms and the original receipts are received, the reimbursement process should be quick. You should keep copies of these receipts for your own records, since the originals will not be returned to you.

Questions about the process can be directed to Deb Osowski.
Department of Biostatistics & Epidemiology
Graduate Student Travel Grant Application

Student Name: ________________________      SPIRE ID#: _______________
Program: _____________________________            ____Master’s   ____Doctoral
Email: ____________________________________

Nature of participation in conference:

___Presenting a paper
___Presenting a poster
___Participating in a panel presentation
___Other: Please specify: __________________________________________
_____________________________________________

Name of conference: _______________________________________________
Location of Conference: ____________________________________________
Scope of Conference: ____National       _____Regional       _____Local

Estimated total costs of conference: ___________________

Other sources of funds: ___Division       _____Faculty grant   _____Other (not personal)

Date of travel: ________________

Signature of faculty advisor indicating support of application:

_______________________________________________________________

Department Chair Approval                Date                Amount approved

_______________________________________________________________
AJE Formatting guidelines: http://www.oxfordjournals.org/our_journals/aje/for_authors/general.html

TABLE FORMAT AND STYLE

Each table must be formatted by using the table feature in Word. Tables should be numbered (Arabic numerals) in the same consecutive sequence in which they are mentioned in the text. They should be concise and self-explanatory. Use a single top rule, a single rule below the headings, and a single bottom rule. Avoid using internal headings, and do not use rules within the table body. Column headings should be clearly delineated, with straddle rules over pertinent columns to indicate subcategories. Whenever possible, data in vertical columns should have the same unit of measurement. Divide overly long tables into 2 or more tables, for example, 1 table for men and 1 for women. Multipart tables are not acceptable.

Table titles should give details on the place of the study, the time of the study, and the study population (if applicable). The designation “Table 1” should be typed flush left, followed by a period and the title. In the title, capitalize all main words, including prepositions of 4 or more letters. For example, “Baseline Characteristics of Infants With Initial and Follow-up Screening, London, United Kingdom, 2001–2003.” (In the text, use an uppercase beginning letter for the words "Table," "Figure," and “Appendix.”) In the table body, leave blank spaces for no entry; avoid using dashes. Order of footnotes: 1) Abbreviations: (no footnote symbol, listed alphabetically, separated by semicolons); 2) other footnotes as necessary, each preceded by a superscript lowercase letter.

REQUIREMENTS FOR FIGURES

Letters, numbers, decimal points, and symbols should be large enough and sharp enough to be readable when figures are reduced and scanned (no smaller than 8 pt in print). All figures will be reduced to fit either in 1 column or within the 2 column width of the Journal page. On maps, add scale (in kilometers or meters) and direction north.

All multipanel figures should have locants to identify each panel. Locants should be capital letters followed by a closing parenthesis, for example, A). Locants should be approximately the same size as the rest of the text in the figure and should appear above and completely to the left of the y-axis title.

When plotting relative measures of effect (e.g., relative risks, relative odds), a logarithmic scale must be used unless there is a compelling reason to use an arithmetic scale. If bars are used to plot the relative measures, they should start at the baseline level of 1.0 rather than at zero.

Figure legends should not be included on the figures themselves but should be typed after the reference list. Each legend should be a separate paragraph and should include details on the place of the study, the time of the study, and the study population (if applicable). Define all figure abbreviations in the legend.

Authors should submit their figures with the manuscript. Color figures are not recommended; there is a per-figure charge to print in color. The charge per color figure is £350 / $600 / €525. Color figures can be published at no charge as Web-only material (refer to the Supplementary Data section of these Instructions). Figures with gray tones are not recommended either. For clarity, use polka dots, hatch marks, or other line art markings instead of grays to differentiate from either black or white. If your figures were created in Word, Excel or PowerPoint, then please submit in that format. For all other programs, please save these figures directly to either EPS or PDF files and submit in that format.

REFERENCES

Number references consecutively in the order in which they are mentioned in the text. Reference numbers in the text are full-sized Arabic numerals in parentheses within the sentence. For 3 or more consecutive references cited all at once, use, for example, (1-4). Format other references as (4, 5, 12), with spaces between the reference numbers.

When directly quoting material in the text, give the reference number followed by the page number(s) of the quotation, for example, (24, p. 65).

Important: All statements of scientific fact should be referenced. Failure to do so may cause considerable delay in processing the manuscript and may necessitate renumbering of the references.
References to personal, written communications should be inserted in parentheses in the text rather than in the reference list. Give the person's name, institutional affiliation, "personal communication," and the year. Verbal communications are not acceptable as supporting documentation.

The reference list should be limited to published or "in press" references. No "submitted" manuscript should appear in the reference list. A manuscript submitted for publication but not yet accepted may be referenced in parentheses in the text. Give the author's name, institutional affiliation, and "unpublished manuscript." Unpublished data may also be cited in the text (e.g., communications with the paper’s coauthors). However, authors should not refer to "forthcoming" papers or promise future publication of results.

References must be verified by the author(s) against the original documents and must give the exact authors' last names, initials, and article title. **Please supply the entire page range and issue number (in parentheses); see examples below.** If only 1 page number is given, indicate in parentheses after the title whether the reference is a letter, an editorial, or an abstract. For manuscripts accepted (not submitted) but not yet published, designate the journal followed by a period and then "In press." For references to papers presented at conferences, give the location (city and state or country), month and days, and year of the conference. For references published online in advance of print publication, provide the journal abbreviation followed by the digital object identifier (DOI) number in parentheses.

For articles originally published in a language other than English, indicate the language in parentheses after the article title provided in English.

Examples of correct forms of references follow. Type references double-spaced. The titles of journals should be abbreviated according to the *List of Journals Indexed in Index Medicus* (published by the National Library of Medicine). For more than 3 authors, list the first 3 and add "et al."

**EXAMPLES OF REFERENCE STYLE**

**Standard journal article**

**Standard journal article with a published correction/erratum**

**Journal article with digital object identifier (article not yet in print)**

**Article in an online-only journal that accounts for the lack of a page range**

**Secondary Citation**

**Secondary Quotation**

**Book**

**Chapter in a Book**
Media reference


Sample Form: Master’s Thesis Committee Nomination Form

From: [Graduate Program Director]
To: Dean of the Graduate School
Subject: Master’s Thesis Committee for [student’s name and ID number]
Date:

I recommend the following Graduate faculty members to serve as the Master’s Thesis Committee for [Student’s name]:

1. [name], Chairperson
2. [name], Member
3. [name], Member

_____________________________________
Signature

_____________________________________
Name and Title
Sample Form: Thesis Proposal Title Page

[TITLE]
A Thesis Proposal Presented

By

[Name in Full]

Approved as to style and content by:

(signature)
[Chairperson’s name, typed]

(signature)
[Member’s name, typed]

(signature)
[Member’s name, typed]

(signature)
[Department Chair’s name, Department, typed]
Sample Form: Project Proposal Title Page

[TITLE]

An MPH Project Proposal Presented

By

[Name in Full]

Approved as to style and content by:

(signature)

[Chairperson’s name, typed]

(signature)

[Member’s name, typed]

(signature)

[Member’s name, typed]

(signature)

[Department Chair’s name, Department, typed]
Sample Form: Thesis Defense Form

From: [Graduate Program Director]

To: Dean of the Graduate School

Subject: Master’s Thesis Defense for [student’s name and ID number]

Date:

I am writing to inform you that [student’s name and ID number] has [passed/failed] the Master’s Thesis Defense in [program name] on [date]. The Master’s Thesis Committee members present were [list of Committee named].

_____________________________________
Chair’s Signature

_____________________________________
Chair’s Name and Title
SAMPLE MS THESIS CALENDAR
2014-2015
Epidemiology program

Fall Semester
September 2  Fall semester classes begin

Recommended dates for preparation of components of thesis proposal and submission to Thesis Chair
  September 12  Thesis topic finalized; Thesis Chair determined
  September 19  Specific aims finalized; Thesis committee finalized
  October 10   Literature review completed
  October 24   Methods completed
  October 31   Data analysis plan completed
  November 7   Limitations completed

November 14  Target date to provide MS thesis committee with complete draft of thesis proposal
             (allows committee 10 days for review and candidate 1 week for changes)
December 5   Fall semester classes end

Spring Semester
January 20  Spring semester classes begin
March 10    Last possible day to provide MS committee with complete draft of the thesis
            (allows committee 10 days for review prior to approval)
March 20    Last possible day to schedule MS oral thesis defense
(late March) Deadline for submitting abstract for Research Day
April 3     Last possible day for MS oral thesis defense
(early April) Research Day
April 10    Degree eligibility forms and tracking forms due to Gloria Seaman
April 17    Degree eligibility forms due to Graduate School
April 29    Spring semester classes end
May 12     Grades due to Registrar
SAMPLE MPH PROJECT CALENDAR
2014-2015
Epidemiology program

Fall Semester
September 2  Fall semester classes begin

Recommended dates for preparation of components of project proposal and submission to Committee Chair
  September 12  Project topic finalized; Chair determined
  September 19  Specific aims finalized; Committee finalized
  October 10   Literature review completed
  October 24   Methods completed
  October 31   Data analysis plan completed
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               (allows committee 10 days for review and candidate 1 week for changes)
December 5    Fall semester classes end

Spring Semester
January 20    Spring semester classes begin
(late March)  Deadline for submitting abstract for Research Day
(early April) Research Day
April 10      Degree eligibility forms and tracking forms due to Gloria Seaman
April 17      Degree eligibility forms due to Graduate School
April 24      Last possible day to provide MPH committee with complete draft of the thesis
               (allows committee 10 days for review prior to approval)
April 29      Spring semester classes end
May 5         Last possible day for MPH oral thesis defense
May 12        Grades due to Registrar
# Epidemiology Program – Degree Requirements

<table>
<thead>
<tr>
<th>Program</th>
<th>MPH [42 credits, total]</th>
<th>MS [45 credits, total]</th>
<th>PhD [72 credits, total]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exit exam option</td>
<td>Project option</td>
<td></td>
</tr>
</tbody>
</table>

## REQUIRED CLASSES

### CORE ~ Epidemiology & Biostatistics
- **BIOSTAT 540/591AF**
- **EPI 630**
- **EPI 630** [6 credits]
- **BIOSTAT 540/591AF**
- **EPI 630**
- **EPI 630** [6 credits]
- **BIOSTAT 540/591AF**
- **EPI 630**
- **EPI 630** [6 credits]

### CORE ~ other public health related
- **EHS 565**
- **HPP 601**
- **HPP 620** [9 credits]
- **EHS 565, or**
- **HPP 601, or**
- **HPP 620** [3 credits]

### Additional Epidemiology & Biostatistics
- **EPI 632**
- **BIOSTAT 640/690NR**
- **EPI 700**
- **EPI 700**
- **EPI 700**
- **EPI 700** [12 credits]
- **EPI 631**
- **BIOSAT 691F**
- **EPI 737**
- **EPI 737**
- **EPI 737** [18 credits]
- **EPI 632**
- **BIOSTAT 640/690NR**
- **EPI 700**
- **EPI 700**
- **EPI 700** [12 credits]
- **EPI 631**
- **BIOSTAT 691F**
- **EPI 737**
- **EPI 737** [18 credits]

### Other
- **EPI 698, Practicum** [3 credits]
- **EPI 892A, Seminar** [3 credits]

## ELECTIVE CLASSES

### Epidemiology a
- **3**
- **[9 credits]**
- **4**
- **[12 credits]**
- **4**
- **[12 credits]**

### Other electives b
- **2**
- **[6 credits]**
- **1**
- **[3 credits]**
- **1**
- **[3 credits]**

### Biostatistics (area of minor concentration) c
- ~
- ~
- ~
- ~
- ~
- **2**
- **[6 credits]**

### 2nd minor area of concentration d
- ~
- ~
- ~
- ~
- ~
- **4**
- **[12 credits]**

## CULMINATING EXPERIENCE
- Exit exam
- **EPI 696D, MPH project** [3 credits]
- **EPI 699, Thesis** [3 credits]
- **EPI 899, Dissertation** [18 credits]
**Elective Epidemiology Courses** *(required for all degree programs)*

Elective epidemiology courses include: 591L, Reproductive Epidemiology; 600, Molecular Epidemiology, 634, Nutritional Epidemiology; 635, Social Epidemiology; 639, Cancer Epidemiology; and 690EW, Women’s Health Epidemiology. For MPH Students, other epidemiology course not required for the degree (e.g., 700 and 737) can fill this requirement. For MS and PhD students, questions regarding whether other courses fulfill this requirement will be considered on a case by case basis. As guidance, to fill this requirement courses should be clearly epidemiological in methods and without substantial overlap with other coursework.

**Other Elective Courses** *(required for all degree programs)*

Graduate level courses offered at UMass (in SPHHS or otherwise) fulfill this requirement. Examples include, but are not limited to PH590TL, Developmental Origins of Disease; PH602, Com Dev & Hlth Ed; PH614, Int’l Health, Population, and Development, Biol 564 Human Physiology, Biol 568 Endocrinology.

**Biostatistics Minor** *(required for PhD program only)*

Doctoral students are required to take two additional courses to constitute their minor coursework in biostatistics. Courses meeting this requirement should be selected in consultation with the student’s advisor. Courses offered by the biostatistics program that fulfill this requirement may vary from year to year, but have included: 690T, Applied Statistical Genetics; 690JQ, Biostatistical Methods 3; 748, Applied Survival Analysis; 749, Statistical Methods for Clinical Trials. Courses offered outside SPHHS meeting this requirement have included: Education 656 Statistics and Comp Analysis 2; Education 771 Applied Multivariate Analysis; Education 637 Nonparametric Analysis; Statistics 505, Regression and ANOVA; Stat 597a-d, SAS; Psychology 891, Hierarchical linear modeling.

**2nd Minor area of concentration** *(required for PhD program only)*

Doctoral students are required to take 4 graduate level courses (see the grad school handbook for exceptions) in a focused area to constitute their second minor, and should choose these courses in consultation with their advisor. Examples of second minors and related coursework are:

<table>
<thead>
<tr>
<th>Minor</th>
<th>Courses</th>
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<tbody>
<tr>
<td><strong>Human reproduction</strong></td>
<td>VASC1521, Phys of Reprod</td>
</tr>
<tr>
<td></td>
<td>PH582, Fam Planning</td>
</tr>
<tr>
<td></td>
<td>EPI 591L, Repro Epi</td>
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<tr>
<td></td>
<td>Biol568, Endocrinology</td>
</tr>
<tr>
<td><strong>Nutrition</strong></td>
<td>Nutr640, Pub Hlth Nutr</td>
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<td></td>
<td>Nutr577, Nutr Prob in US</td>
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<td></td>
<td>Nutr741, Meth in Nutr Res</td>
</tr>
<tr>
<td></td>
<td>EPI 634, Nutritional Epi</td>
</tr>
<tr>
<td><strong>Genetics</strong></td>
<td>Microbio330, Microbial gen</td>
</tr>
<tr>
<td></td>
<td>Microbio590s, Parasitology</td>
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<tr>
<td></td>
<td>Microbiol585, Concepts Mol Gen</td>
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<tr>
<td></td>
<td>Microbiol690T, Stat Gen</td>
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<tr>
<td><strong>Physical activity &amp; women’s hlth</strong></td>
<td>EPI 690EW, Epi of Women’s Hlth</td>
</tr>
<tr>
<td></td>
<td>PH582, Fam Plan and Women’s Hlth</td>
</tr>
<tr>
<td></td>
<td>Kin470, Exercise physiology</td>
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<tr>
<td></td>
<td>Kin571, PA and Women’s Hlth</td>
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</table>
Suggested MS course plan

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td><strong>Fall 2015</strong></td>
<td><strong>Spring 2016</strong></td>
<td><strong>Fall 2016</strong></td>
<td><strong>Spring 2017</strong></td>
</tr>
<tr>
<td>BIOSTAT 540</td>
<td>BIOSTAT 640 or BIOSTAT 690NR†</td>
<td>EPI 631</td>
<td>EPI 699</td>
</tr>
<tr>
<td>EPI 630</td>
<td>EPI 632</td>
<td>EPI 700</td>
<td>Epi elective*</td>
</tr>
<tr>
<td>BIOSTAT 691F</td>
<td>Epi elective*</td>
<td>EPI 737</td>
<td></td>
</tr>
<tr>
<td>HPP 601 or EHS565 or HPP 620</td>
<td>Epi elective*</td>
<td>Epi elective*</td>
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</tbody>
</table>

* Total of 3 Epi electives required
† BIOSTAT 690NR requires knowledge of R statistical software; students wanting to this course in Spring 2016 should register for the 1-credit seminar BIOSTAT 597: Special Topics in Fall 2015, which introduces R.

Suggested MPH course plan: Exit Exam option

<table>
<thead>
<tr>
<th>1</th>
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<tbody>
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<td>BIOSTAT 640</td>
<td>HPP 601 or EHS 565</td>
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</tr>
<tr>
<td>EPI 630</td>
<td>EPI 632</td>
<td>EPI 700</td>
<td>Other elective*</td>
</tr>
<tr>
<td>BIOSTAT 691F (Other elective)</td>
<td>Epi elective*</td>
<td>Other elective*</td>
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<tr>
<td>HPP 620</td>
<td>Epi elective*</td>
<td>Other elective*</td>
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<tr>
<td></td>
<td></td>
<td>EPI 698 (summer 2016)</td>
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</tbody>
</table>

* Total of 3 Epi electives required and 2 other elective required

Suggested MPH course plan: MPH Project option

<table>
<thead>
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<th>1</th>
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<tbody>
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<td><strong>Fall 2016</strong></td>
<td><strong>Spring 2017</strong></td>
</tr>
<tr>
<td>BIOSTAT 540</td>
<td>BIOSTAT 640</td>
<td>EPI 631 (epi elective)</td>
<td>EPI 696</td>
</tr>
<tr>
<td>EPI 630</td>
<td>EPI 632</td>
<td>EPI 700</td>
<td>Other elective*</td>
</tr>
<tr>
<td>BIOSTAT 691F (Other elective)</td>
<td>Epi elective*</td>
<td>Other elective*</td>
<td>Epi elective*</td>
</tr>
<tr>
<td>HPP 601 or EHS 565 or HPP 620</td>
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<td>HPP 601 or EHS565</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>EPI 698 (summer 2015)</td>
<td></td>
</tr>
</tbody>
</table>

* Total of 3 Epi electives required (One should be 631) and 1 other elective required

Planned timing of Epi electives 2014-2016 (subject to change):

<table>
<thead>
<tr>
<th>1</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>EPI 635: Social Epi (prereq)</td>
<td>EHS 600: Molec Epi</td>
<td>EPI 631: Grant writing</td>
<td>EPI 634: Nutritional Epi</td>
</tr>
<tr>
<td>EPI 639: Cancer Epi (prereq)</td>
<td>Additional Epi elective (TBD)</td>
<td>EPI 700: Data analysis</td>
<td>EPI 591L: Repro Epi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EPI 635: Social Epi</td>
<td>EHS 600: Molec Epi</td>
</tr>
</tbody>
</table>